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Publication Details

Journal of Applied Sport Psychology

Repository Citation

Roberts, R., Woodman, T., Hardy, L., Davis, L., & Wallace, H. M. (2013). Psychological skills do not always help performance: The moderating role of narcissism. *Journal of Applied Sport Psychology*, 25(3), 316-325. doi: 10.1080/10413200.2012.731472

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Running head: NARCISSISM, PSYCHOLOGICAL SKILLS AND PERFORMANCE

Article accepted in current form in the *Journal of Applied Sport Psychology*:

Roberts, R., Woodman, T., Hardy, L., Roberts, L., & Wallace, H. M. (2013). Psychological skills do not always help performance: The moderating role of narcissism. *Journal of Applied Sport Psychology*, 25, 316-325. doi:10.1080/10413200.2012.731472

Psychological skills do not always help performance: The moderating role of narcissism

Ross Roberts, Tim Woodman, Lew Hardy, Louise Roberts, & Harry Wallace

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Abstract

Psychological skills are typically viewed as beneficial to performance in competition. Conversely, narcissists appear to thrive in competitive environments so should not need psychological skills to the same degree as less narcissistic individuals. To investigate this moderating hypothesis high-standard ice-skaters completed measures of narcissism, psychological skills, and anxiety before performing their competition routine during training. A week later, participants performed the same routine in competition. Performance was operationalized as the difference between competition and training scores. Moderated regression analyses revealed that narcissism moderated the relationship between psychological skills and performance. Psychological skill effectiveness depends on an individual's degree of narcissism.

Keywords: Narcissist, competition, mental skills, opportunity for glory

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Psychological skills do not always help performance: The moderating role of narcissism

Sport performance is rarely considered optimal unless it is achieved in a competition setting.

In other words, performance in training counts for nothing in the competition world. While some individuals seem to thrive in competition environments, others are prone to perform poorly. Indeed, research supports the fact individual differences in personality do predict competitive performance (e.g., see Geukes, Mesagno, Hanrahan, & Kellmann, 2012 for a recent example). In the present study, we examine a variable that holds considerable promise for researchers interested in the effect of personality on performance, yet has only received limited attention: narcissism.

In clinical settings, narcissism is defined as “a pervasive pattern of grandiosity, need for admiration, and a lack of empathy” (*Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. text revision [DSM-IV TR]; American Psychiatric Association, 2000, p. 714). Research in normal (i.e., subclinical) settings has revealed that narcissism is associated with a grandiose self-view and feelings of entitlement. In the present article, the terms *narcissists* or *high narcissists* are used interchangeably to describe individuals who score relatively high on valid self-report measures of narcissism such as the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979), as opposed to individuals with narcissistic personality disorder. The term *low narcissist* is used to describe individuals with relatively low scores on such self-report measures.

Narcissists consider themselves to be special people who are superior to others (Gabriel, Critelli, & Ee, 1994), report high levels of confidence (Campbell, Goodie, & Foster, 2004), and are self-focused and vain (Morf & Rhodewalt, 2001). However, despite such grandiose beliefs, narcissists often do not perform any better than non-narcissistic individuals. For example, Gabriel et al. (1994) found no relationship between narcissism and performance on intelligence tests in a college sample, despite the fact that narcissists believed they had performed very well. One exception to this set of non-significant performance differences comes from a series of studies by Wallace and Baumesiter (2002), who provided convincing evidence that the narcissism-

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performance relationship is moderated by perceived opportunity for personal glory. Specifically, narcissists performed well when the opportunity for glory was high and poorly when it was low. Conversely, in Wallace and Baumeister's (2002) research, when the competition environment was intensified (via an increase in opportunity for glory) low narcissistic individuals tended to perform worse. More recently, research in the sporting domain has supported Wallace and Baumeister's findings by demonstrating relationships between narcissism and performance in competitive situations (Geukes et al., 2012). Furthermore, Wallace and Baumeister's work has also been extended, by examining: whether on-task effort explains such performance increases for narcissists (Woodman, Roberts, Hardy, Callow, & Rogers, 2011); how the use of imagery impacts the narcissism-performance relationship (Roberts, Callow, Hardy, Woodman, & Thomas, 2010); and the effect of leader behaviors on narcissists' effort (Arthur, Woodman, Ong, Hardy, & Ntoumanis, 2011).

Given previous findings that narcissists perform well when the opportunity for glory is present, and poorly when it is not (see Roberts et al., 2010; Wallace & Baumeister, 2002; Woodman et al., 2011), one would expect that – all other things being equal – narcissists should perform better in competition than in training. This is because competition provides a greater opportunity for personal glory. In contrast, low narcissists should suffer more – in performance terms – in a competitive setting. As such, researchers should consider the factors that might reduce the likelihood for low narcissists to suffer performance decrements in competition. The psychological skills of self-talk, relaxation and emotional control have all been linked to improved performance in competitive situations (e.g., see Hardy, Jones, & Gould, 1996; Thomas, Murphy, & Hardy, 1999) and are seen as key components of peak performance (Krane & Williams, 2006). These skills are thought to help performers maintain control of their emotional state and thus their preparation for competitive performance. Given low narcissists' apparent difficulty with performance in competition, the use of these strategies may be particularly effective in aiding performance in that

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setting. Conversely, as research (e.g., Wallace & Baumeister, 2002) demonstrates that narcissists tend to thrive in competitive environments, such strategies may not be necessary or indeed may be less effective. Thus, the purpose of the present study was to examine the interaction between narcissism and psychological skills on performance. We hypothesized that self-talk, relaxation and emotional control would be positively associated with improved performance in competition for low narcissists only.

Method

Participants

An opportunistic sample of 40 figure and dance ice skaters ($M_{\text{age}} = 13.98$, $SD = 2.87$, $n = 31$ females) volunteered to take part in the study. All participants were actively competing at national ($n = 32$) or international standard ($n = 8$). Informed consent was obtained from all participants before participating. For athletes under 18, consent forms were signed *in loco parentis* by coaches.

Measures

Narcissism. Narcissism was assessed using the Narcissistic Personality Inventory – 40 (NPI-40; Raskin & Hall, 1979). The NPI-40 is a 40-item forced-choice inventory. For each item, participants are asked to choose between one narcissistic and non-narcissistic statement. An example item is as follows:

A I have a natural talent for influencing people

B I am not good at influencing people

The number of narcissistic responses is summed to give a total narcissism score, with a range of 0-40. Considerable evidence exists (e.g., see Raskin & Terry, 1988 for a review) supporting the internal consistency, factorial validity, and construct validity of the NPI.

Psychological skills. To assess psychological skill use in competition, the Test of Performance Strategies – 2 (TOPS-2; Hardy, Roberts, Thomas, & Murphy, 2010) was completed. The TOPS-2 measures psychological skill use in training and competition and has been shown to

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possess very good factorial validity (Hardy et al., 2010). Each subscale comprises four items and ratings are made on a five-point Likert scale from 1 (*Never*) to 5 (*Always*). Although the TOPS-2 measures a number of psychological skills, only the self-talk (e.g., “I say things to myself to help my competition performance), relaxation (e.g., “I use relaxation techniques as a coping strategy at competitions”) and emotional control (e.g., “my emotions keep me from performing my best at competitions”) scales were completed.

Anxiety. Given that competition is often perceived as a more anxiety-inducing environment than training (cf. Hardy et al., 1996), we used the revised version of the Competitive State Anxiety Inventory -2 (CSAI-2R; Cox, Martens, & Russell, 2003) to examine potential competition-induced increases in anxiety. The CSAI-2R assesses pre-competition cognitive anxiety (five items), somatic anxiety (seven items), and self-confidence (five items) and has been shown to be an improvement over the original CSAI-2 (see Cox et al., 2003) in terms of its factorial validity. Responses are made on a four-point Likert scale from 1(*not at all*) to 4 (*very much so*) and subscale scores are calculated by summing responses to each item, dividing by the number of items, and then multiplying by 10. The CSAI-2R was administered in training and in competition (see Procedure) and only the cognitive anxiety (e.g., “I am concerned about losing”) and somatic anxiety (e.g., “I feel jittery”) scales were used in subsequent analyses.

Procedure

After gaining institutional ethics approval, each potential participant was contacted by a letter that was sent to skating coaches and organisations. Coaches and organisations were asked if they would be willing to allow the authors to visit potential participants in a training session one week before an upcoming national competition, to ask participants to complete questionnaires, and then to record participants’ performance of their competitive skating routine. Participants from assenting organisations were then approached at a training session. Once consent had been obtained, participants completed the three questionnaires (NPI, CSAI-2R, TOPS-2) in the presence

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of the authors. To reduce potential problems associated with understanding and readability in the (young) sample, participants were encouraged to ask questions if they were unsure of the meaning of any of the items on the questionnaires. Confidentiality and anonymity of responses was assured throughout. Once they had completed the questionnaires, participants were video-recorded while performing the competitive routine that they would be performing a week later in competition. At the competition, participants were required to complete the CSAI-2R 30 minutes before their performance. Performance in the competition was again video-recorded by the authors.

Each video-recorded performance ($n = 80$ in total; one performance in training and one performance in competition for each participant) was marked by a panel of three professional judges from the National Ice Skating Association (UK) using the 6.0 judging system¹, where marks are awarded for technical merit and overall quality of the routine on a 0 (*did not skate*) to 6 (*perfect and faultless*) scale. All judges were blind to the nature of the study and provided their scores independently of the other judges.

Results

Preliminary analyses

Intra-class correlation coefficients (ICC's) were obtained to assess the reliability of the judges' scores. As the ICC's were acceptable for both training ($ICC = .95, p < .001$) and competition ($ICC = .97, p < .001$), mean judge scores for training and competition were calculated for each participant. Descriptive statistics, Cronbach's alphas and Pearson correlations are presented in Table 1. Mean NPI scores, were comparable with recent studies (e.g., Twenge, Konrath, Foster, Campbell, & Bushman, 2008). TOPS-2 scores indicated a moderate use of self-talk and relaxation, and a moderate ability in emotional control. Changes in anxiety from training to competition were also examined. Paired sample t -tests revealed no significant difference between training and competition scores for cognitive anxiety ($t_{39} = 1.11, p = .27$) or somatic anxiety ($t_{39} = -.07, p = .94$).

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Thus, despite competition being generally considered a more anxiety-inducing environment than training, anxiety was not significantly higher. We return to this issue in the discussion.

Main analysis

We used moderated regression to examine the hypothesis that increased psychological skill use would be associated with an increase in performance for low narcissists only. To obtain a measure of performance (the dependent variable), we subtracted the training score from the competition score. Thus, positive scores indicated that the participant performed better in competition than in training whereas negative scores indicated a worse performance in competition.

For each regression analysis, the relevant psychological skill was entered at step 1, followed by narcissism (at step 2), and then the interaction at step 3. Alpha was set at .05 for each analysis and all variables were centred using *z*-score transformations before being entered into the regression model². The results of the regression analyses are presented in Table 2. Before running the analyses, multicollinearity was assessed by examining variance decomposition proportions and the condition index (cf. Belsley, Kuh, & Welsh, 1980). Belsey et al. (1980) recommend that independent variables with condition indices above 30 and variance decomposition proportions of .5 or above on two or more regression coefficients (indicating that this variable is contributing to 50% or more of the variance in two or more regression coefficients) should be removed. All independent variables satisfied these criteria, as all condition indices were lower than 2.

Relaxation. Relaxation was positively related to performance at step 1 ($\beta = .19, p = .07$). Narcissism significantly predicted performance over and above relaxation at step 2 ($\beta = .47, p = .002$). Of more central interest, a significant interaction was revealed in the final step of the model ($\beta = .36, p = .01$). Figure 1 (top) displays the nature of the interaction. Simple slope analysis indicated that the use of relaxation was associated with improvements in performance for narcissists ($t_{36} = 2.92, p = .006$), but had no impact on performance for low narcissists ($t_{36} = -1.19, p = .24$).

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Self-Talk. Self-talk failed to account for any variance in performance at step 1 ($\beta = .06, p = .70$). Narcissism significantly predicted performance over and above self-talk in the second step ($\beta = .54, p < .001$). The interaction term at step 3 was also significant ($\beta = .33, p = .03$, see Figure 1, middle, for the nature of the interaction). Simple slope analysis revealed that self-talk use was associated with worse performance for low narcissists ($t_{36} = -1.92, p = .06$) but did not affect the performance of narcissists ($t_{36} = 1.53, p = .14$).

Emotional control. Emotional control significantly predicted performance at step 1 ($\beta = .36, p = .03$), as did narcissism at step 2 ($\beta = .55, p = .001$). The interaction, step 3, was also significant ($\beta = -.30, p = .04$, see Figure 1, bottom). Simple slope analyses revealed that increases in emotional control were associated with improved performance when narcissism was low ($t_{36} = 2.52, p = .02$), with no impact when narcissism was high ($t_{36} = -.92, p = .36$).

Discussion

The present study examined the moderating role of narcissism on the relationship between psychological skills and performance. As low narcissists are prone to suffer in competitive situations (Wallace & Baumeister, 2002), we hypothesized that they are likely to find psychological skills that aid performance to be particularly useful. The same psychological skills should be less beneficial for narcissists because competition provides narcissists with an opportunity for glory, upon which they appear to thrive (Wallace & Baumeister, 2002). Although the results clearly demonstrated interactions between narcissism and psychological skills, they revealed some surprising findings as two of the three interactions were precisely counter to the hypotheses. That is, it was only narcissists who benefited from using relaxation strategies. Furthermore, the use of self-talk was associated with *worse* performance in competition for low narcissists. Conversely, as was specifically hypothesized, the use of emotional control strategies helped only low narcissists' performance.

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1 The beneficial impact of emotional control on low narcissists' performance demonstrates
2 that it is particularly important to be able to control one's emotions during competition (cf. Hardy et
3 al., 1996; Thomas et al., 1999), especially for those individuals who would not naturally enjoy
4 competitive situations. Good emotional control skills for low narcissists seems particularly
5 important given that low narcissists lacking in emotional control skills were vulnerable to
6 performing poorly in competition, and that self-talk and relaxation did not aid low narcissists'
7 performance.

8 A potential explanation for low narcissists' lack of benefit from the use of relaxation or
9 self-talk stems from how these constructs are measured. On the TOPS-2 self-talk and relaxation are
10 measured in terms of their *strategic use* (e.g., "I say things to myself to help my competitive
11 performance") whereas emotional control is measured in terms of *ability* (e.g., "I have difficulty
12 with my emotions at competitions," see Hardy et al., 2010). Thus, the frequency with which one
13 *uses* relaxation or self-talk does not reflect one's *ability* to use these strategies effectively.
14 Following this line of reasoning, it is possible that low narcissists simply may not be particularly
15 good at using relaxation or self-talk. In fact, competition may actually lead low narcissists to use
16 psychological skills *ineffectively* (e.g., using the wrong type of self-talk for a particular situation).
17 Thus, future research should examine not only the *use* of psychological skills, but also the
18 *effectiveness* and *ability* to use these skills.

19 Self-talk seemed to have a paradoxical effect on performance for low narcissists, as greater
20 use was associated with worse – not better – performance. While this effect may appear
21 counterintuitive, recent evidence (Wood, Perunovic, & Lee, 2009) supports the notion that self-
22 statements designed to have positive effects can backfire for those who need them most. More
23 specifically, Wood et al. (2009) found that the use of positive self-statements by low self-esteem
24 individuals actually led to decreases in mood and suggested that this effect could be a result of
25 positive statements highlighting the discrepancy between their actual and ideal self, making these

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1 individuals feel worse. That finding dovetails the present results well. Narcissism and self-esteem
2 are typically positively related (cf. Morf & Rhodewalt, 2001) and thus the more low narcissists use
3 self-talk, the more they remind themselves that they are not as prepared or as good as they would
4 like to be, thus exacerbating competition-induced negative affect. However, despite the appeal of
5 this explanation, it remains somewhat speculative without insight into: (a) the precise content of
6 low narcissists' self-talk; and (b) the nature of discrepancies between low narcissists' actual and
7 ideal states. Studies examining these issues would be particularly informative.

8 The performance of narcissists was less affected by psychological skill use. This was
9 expected, as competition provides narcissists with the opportunity for glory that they crave.
10 However, this does not mean that psychological skills are redundant for narcissists. Indeed,
11 relaxation was associated with increases in performance for narcissists. In addition, narcissists have
12 been shown to benefit from the use of imagery, as long as it is from an external perspective
13 (Roberts et al., 2010). It is possible that narcissists' positive appraisals of competition situations
14 (i.e., an opportunity for glory) as well as their beliefs in their own ability lead them to be confident
15 in using psychological skills effectively. As a result, it is conceivable that most psychological skills
16 could work for them. Future research examining the effects of other psychological skills on the
17 performance of narcissists would be useful.

18 The present data add to the emerging literature (e.g., Roberts et al., 2010; Woodman,
19 Zourbanos, Hardy, Beattie, & McQuillan, 2010) that show that personality moderates the
20 effectiveness of psychological skills. As such, applied practitioners should consider personality
21 characteristics when implementing psychological skills with athletes. In addition, practitioners need
22 to be careful about using certain psychological skills with some athletes (e.g., low narcissists), as
23 they may prove counterproductive (i.e., detrimental to performance). Further, low narcissists seem
24 particularly susceptible to the benefits of strategies that are designed to aid emotional control.

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1 Finally, teaching psychological skills to narcissists does not seem to be a redundant activity, as
2 some benefits can be gained.

3 This study is not without its limitations. First, our decision to use fairly high-standard
4 athletes means that, inevitably, the available sample pool was rather limited. Second, although we
5 chose to limit the error associated with sampling from various sports this comes at a cost in
6 generalizability. Third, although we took steps to minimize problems associated with participant
7 understanding, it is possible that readability issues may have had some impact on the findings.
8 Finally, and perhaps most importantly, anxiety did not significantly increase from training to
9 competition which might lead one to question whether competition was a more anxiety-inducing
10 environment than training. However, several issues are noteworthy here that lead us to believe this
11 to be the case. The fact that participants were all experienced at competing at a high-standard means
12 that they may have been more seasoned with regard to the pressure of competition and so would
13 have reported lower levels of anxiety³. In addition, narcissists are known to engage in ego-
14 protecting strategies (Morf & Rhodewalt, 2001) and thus may not accurately self-report their actual
15 anxiety; this would dilute any anxiety difference between training and competition. With this in
16 mind, future research examining narcissism, stress, and performance may want to consider
17 psychophysiological measures of anxiety to overcome this issue (cf. Woodman & Davis, 2008).

18 In summary, narcissism consistently moderated the effects of psychological skills on
19 performance. Future research would do well to clarify these effects and identify the processes that
20 underlie them. This will help to further advance our understanding of the influence of individual
21 differences on performance, and the effect of personality on psychological skills.

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7

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Footnote

1. Although the 6.0 judging system has now been replaced by the International Skating Union (ISU) Code of Points system, these data were collected and analyzed when the 6.0 judging system was still used in competitive ice skating.
2. Previous research has investigated sex effects in narcissism and has produced equivocal results (e.g., see Morf & Rhodewalt, 2001 and Wallace & Baumeister, 2002 for more on this issue). In addition, given the unequal split of males and females in our sample, we re-analyzed the data standardizing for sex. As the original results were reliably replicated, the sex findings are not reported.
3. We would like to thank an anonymous reviewer for this suggestion.

1 Table 1

2

3 *Descriptive Statistics and correlations between study variables (n = 40)*

Measure	1	2	3	4	5	6	7	8	9	10	11
1. Narcissism	-	.28	-.22	.25	.01	-.03	-.14	-.12	.11	.44*	.51**
2. Self-Talk		-	-.01	.55**	-.15	-.19	-.54**	-.43**	-.34*	-.26	.06
3. Emotional Control			-	-.11	.36*	.20	.40**	.06	.29	.49**	-.36*
4. Relaxation				-	-.26	-.35*	-.37*	-.48**	-.11	.10	.29
5. Somatic anxiety (T)					-	.28	.52**	.31*	-.10	-.13	-.06
6. Somatic anxiety (C)						-	.27	.48**	-.13	-.22	-.15
7. Cognitive anxiety (T)							-	.44**	-.01	.04	.06
8. Cognitive anxiety (C)								-	-.04	-.11	-.16
9. Training									-	.76**	-.20
10. Competition										-	.49**
11. Performance											-
Mean	18.18	14.10	14.65	17.55	15.39	15.32	18.85	19.95	2.97	3.09	0.12
SD	9.01	3.36	4.93	3.85	5.08	5.39	5.83	5.93	0.41	0.46	0.31
Alpha	.93	.84	.92	.67	.85	.88	.78	.78	-	-	-

4 Note: T = Training, C = Competition, * $p < .05$, ** $p < .001$

5

Table 2

Regression analyses examining interactions between narcissism and psychological skills on performance

Model	Variable	ΔR^2	ΔF	df	B	SE B	β	t
REL								
Step 1	REL	.08	3.39	1, 38	.09	.05	.29	1.84
Step 2	REL				.05	.05	.17	1.18
Step 3	NAR	.21	10.85	1, 37	.15	.05	.47	3.29**
	Constant				.09	.04		2.24
	REL				.06	.04	.19	1.45
	NAR				.11	.04	.36	2.56*
	REL \times NAR	.12	7.33	1, 36	.13	.05	.36	2.71**
ST								
Step 1	ST	.004	0.14	1, 38	.02	.05	.06	0.38
Step 2	ST				-.027	.05	-.085	-0.58
Step 3	NAR	.27	13.50	1, 37	.17	.05	.54	3.68***
	Constant				.10	.04		2.25*
	ST				.004	.05	.01	0.08
	NAR				.14	.05	.44	3.06**
	ST \times NAR	.10	5.41	1, 36	.11	.05	.33	2.33*
EC								
Step 1	EC	.10	4.12	1, 38	.11	.05	.36	2.34*
Step 2	EC				.08	.04	.25	1.83
Step 3	NAR	.21	11.21	1, 37	.14	.04	.46	3.30**
	Constant				.15	.04		3.61***
	EC				.03	.05	.09	0.67
	NAR				.17	.04	.55	3.96***
	EC \times NAR	.07	4.31	1, 36	-.11	.05	-.31	-2.11*

Note: REL = relaxation, ST = self-talk, EC = emotional control, NAR = narcissism, * $p < .05$, ** $p < .01$, *** $p < .001$

NARCISSISM, PSYCHOLOGICAL SKILLS AND PERFORMANCE

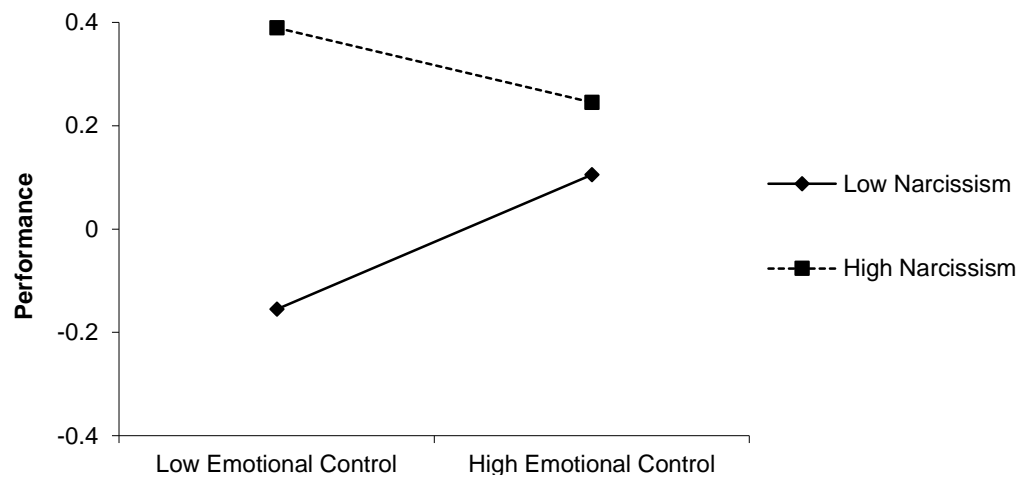
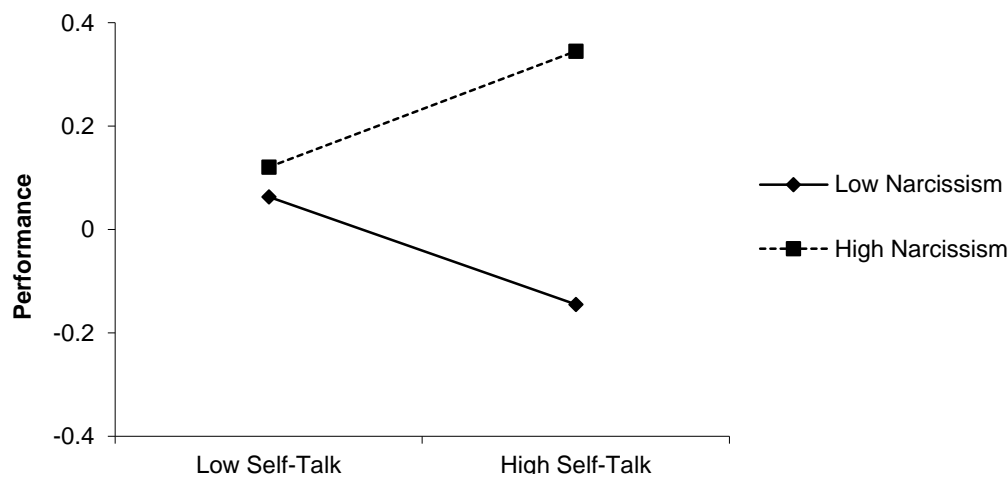
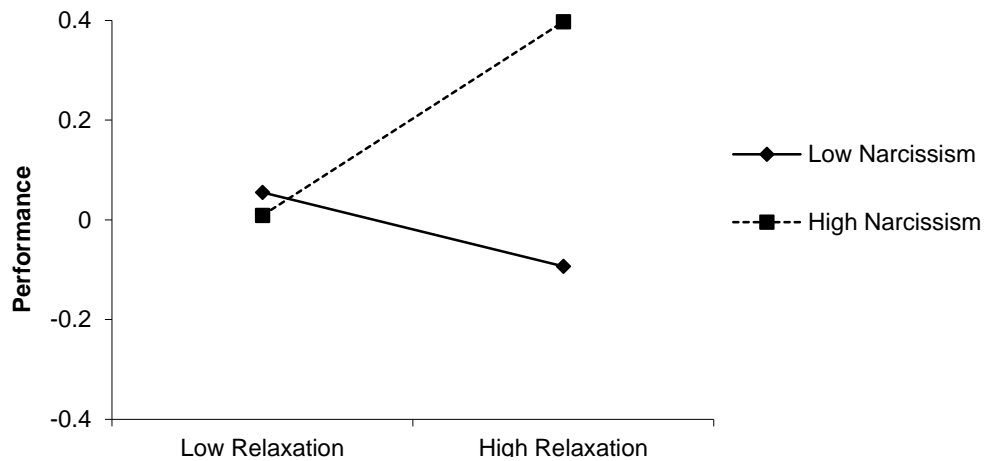


Figure 1. Interactions between relaxation and narcissism (top), self-talk and narcissism (middle),

and emotional control and narcissism (bottom), on performance. Regression slopes are derived from regression equations with hypothetical individuals who are one standard deviation below the mean (low) or one standard deviation above the mean (high). Performance refers to the difference between training and competition scores (higher scores indicate better performance in competition).